

ABSTRACT OF THE INVENTION

The invention provides a method and device for light generation wherein the device comprises a lower electrode, a substrate formed on the lower electrode, a triangle mesa structure formed on the substrate for lateral confinement of light, a triangle optical cavity formed in the mesa structure, an upper electrode formed on the mesa structure, and a plurality of contact spots formed on the upper electrode corresponding to the maxima of optical field intensity for at least one optical mode on a lateral plane in the triangle optical cavity. Another embodiment of the device according to the invention further comprises a plurality of triangle mesa structures, along with a light output structure for directing and controlling light output from the device, which are formed on the substrate in various topologies such as a matrix or an array.